METHODS FOR CONSISTENT FOREWARNING OF CRITICAL EVENTS ACROSSMULTIPLE DATA CHANNELS

Patent number:

CA2491987

Publication date:

2004-01-22

Inventor:

HIVELY LEE M (US)

Applicant:

UT BATTELLE LLC (US)

Classification:

- international:

G06F19/00; G06F19/00; (IPC1-7): G06F19/00

- european:

G06F19/00A

Application number: CA20032491987 20030701

Priority number(s): US20020195626 20020712; WO2003US20700

20030701

Also published as:

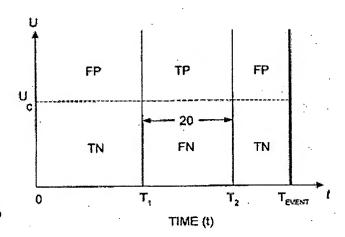
WO2004008373 (A3) WO2004008373 (A2) US2004087835 (A1) MXPA05000564 (A). CN1679042 (A)

more >>

Report a data error here

Abstract of CA2491987

This invention teaches further method improvements to forewarn of critical events via phase-space dissimilarity analysis of data from biomedical equipment, mechanical devices, and other physical processes. One improvement involves conversion of time-serial data into equiprobable symbols. A second improvement is a method to maximize the channel-consistent total-true rate of forewarning from a plurality of data channels over multiple data sets from the same patient or process. This total-true rate requires resolution of the forewarning indications into true positives (TP), true negatives (TN), false positives (FP) and false negatives (FN) relative to a forewarning window 20. A third improvement is the use of various objective functions, as derived from the phase-space dissimilarity measures, to give the best forewarning indication. A fourth improvement uses various search strategies over the phase~space analysis parameters to maximize said objective functions. A fift h improvement shows the usefulness of the method for various biomedical and machine applications.



Data supplied from the esp@cenet database - Worldwide